Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

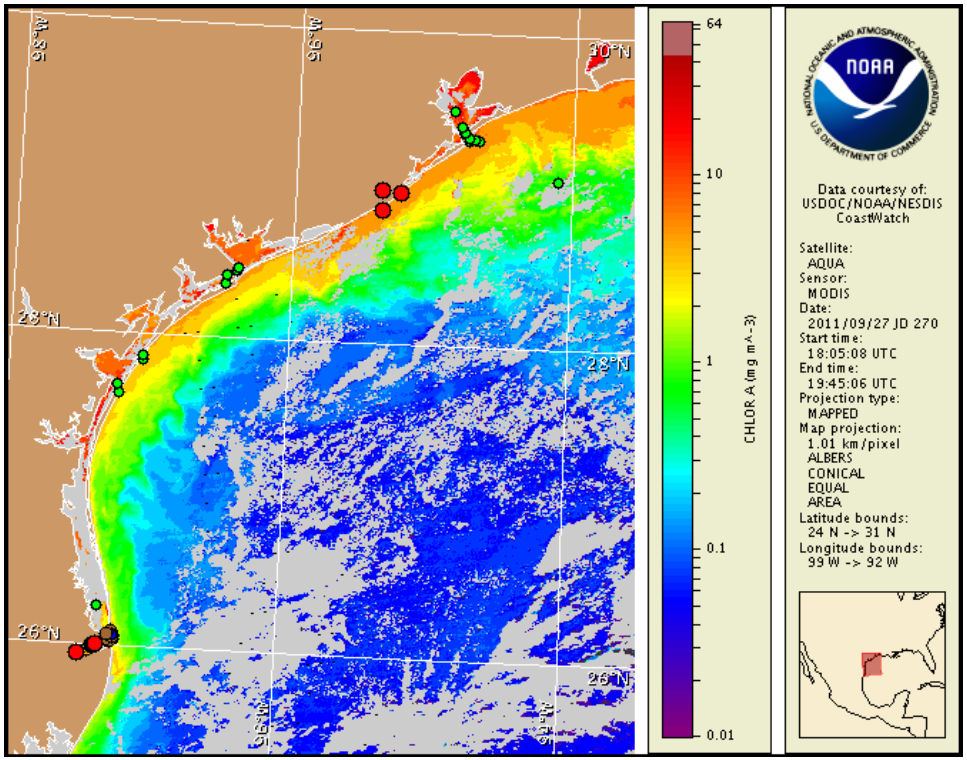
Thursday, 29 September 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Monday, September 26, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from September 19 to 28 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

A harmful algal bloom has been identified along the Texas coast in the San Luis Pass area and also continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. Patchy high impacts are possible in the coastal Freeport region today and Sunday, and patchy low impacts are possible in the coastal Freeport region Friday and Saturday. Patchy high impacts are possible in the Brownsville Ship Channel area today through Sunday. Patchy moderate impacts are possible in the lower Laguna Madre and patchy low impacts are possible along the coastal South Padre Island and Brazos Island State Park regions today through Sunday. No additional impacts are expected at the coast in Texas today through Sunday, October 2. Reports of dead fish have been received from the Bahia Grande area in southern Texas.

Analysis

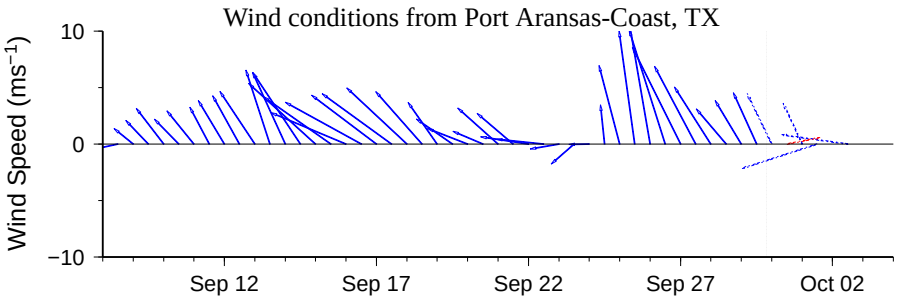
A harmful algal bloom has been identified from San Luis Pass to the gulf side of the Brazos River and also continues to be present along the Texas coast in the South Padre Island and Brazos Island State Park regions, within the Brownsville Ship Channel area, and within the lower Laguna Madre. In southern Texas, continued sampling within the Brownsville Ship Channel indicates 'medium' to 'high' *Karenia brevis* concentrations within the channel (9/26-28; TPWD). One sample collected in the southwest corner of the Bahia Grande, where dead fish have been reported, also identified 'high' *K. brevis* concentrations (9/28; TPWD). Samples collected within the lower Laguna Madre over the past few days identified *K. brevis* concentrations ranging from 'not present' to 'low a' at Isla Blanca Park (9/26-28; TPWD) and one 'low a' concentration at the west end of the Queen Isabella Memorial Causeway (9/28; TPWD). One sample collected within the Intracoastal Waterway just east of El Realito Bay indicated that *K. brevis* is not present (9/27; TPWD). Three samples collected at Brazos Santiago Pass ranged from not present to 'very low a', and three samples collected at the UTPA Coastal Studies Lab indicated *K. brevis* concentrations ranging from 'present' to 'low a'. In northern Texas, several samples collected alongshore Galveston, within Bolivar Pass, and in Galveston Bay, as well as in Matagorda (Port O'Connor) and Espiritu Santo bays, indicate that *Karenia brevis* is not present in these areas (9/26-28; TPWD, DSHS). Background *K. brevis* concentrations have been identified in Corpus Christi Bay and inside Port Aransas Pass (9/29; TPWD). No new samples have been received from the Freeport area where 'high' *K. brevis* concentrations were identified late last week (9/22; TPWD). Continued sampling in this area is recommended.

Recent MODIS imagery (9/27, shown left) indicates elevated chlorophyll (1-4 μg/L) stretching alongshore the Texas coastline from Pass Cavallo to Brazos Santiago Pass. Elevated chlorophyll (2-10 μg/L) is also visible along- and offshore from Sabine Pass to Pass Cavallo, including a feature of elevated to high chlorophyll (4-13μg/L) along the coast just north of East Matagorda Bay centered at 28°40'15''N 95°40'35''W, extending approximately 12km offshore. Elevated chlorophyll at the coast may contain *K. brevis* but could also be due to the continued resuspension of benthic chlorophyll and sediments, making it difficult to determine the extent of blooms from satellite imagery alone.

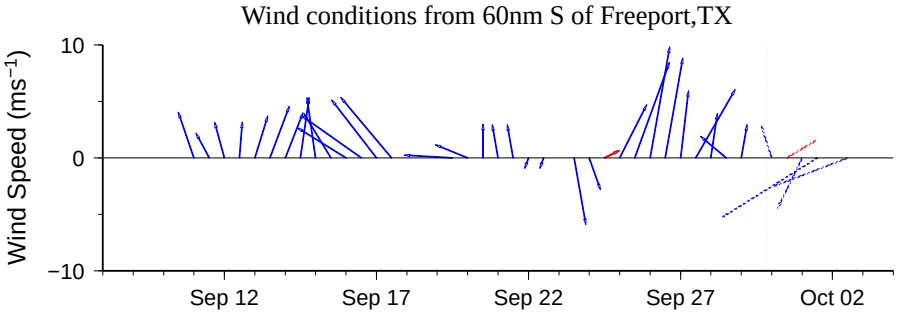
Forecast models indicate a maximum bloom transport of 90km north along the coast from coastal sample locations in the San Luis Pass region from September 22 to October 2, and

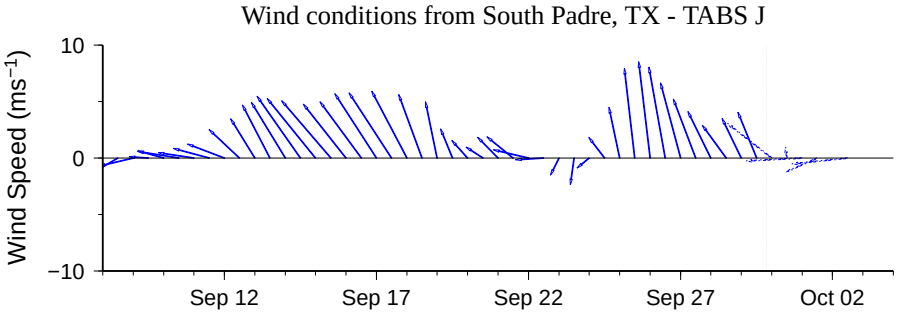
a maximum bloom transport of 30km north from coastal sample location in the Brazos Santiago Pass region from September 28 to October 2. Forecast models indicate a maximum transport of 20km north from Port Aransas from September 28 to October 2.

Derner, Kavanaugh



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



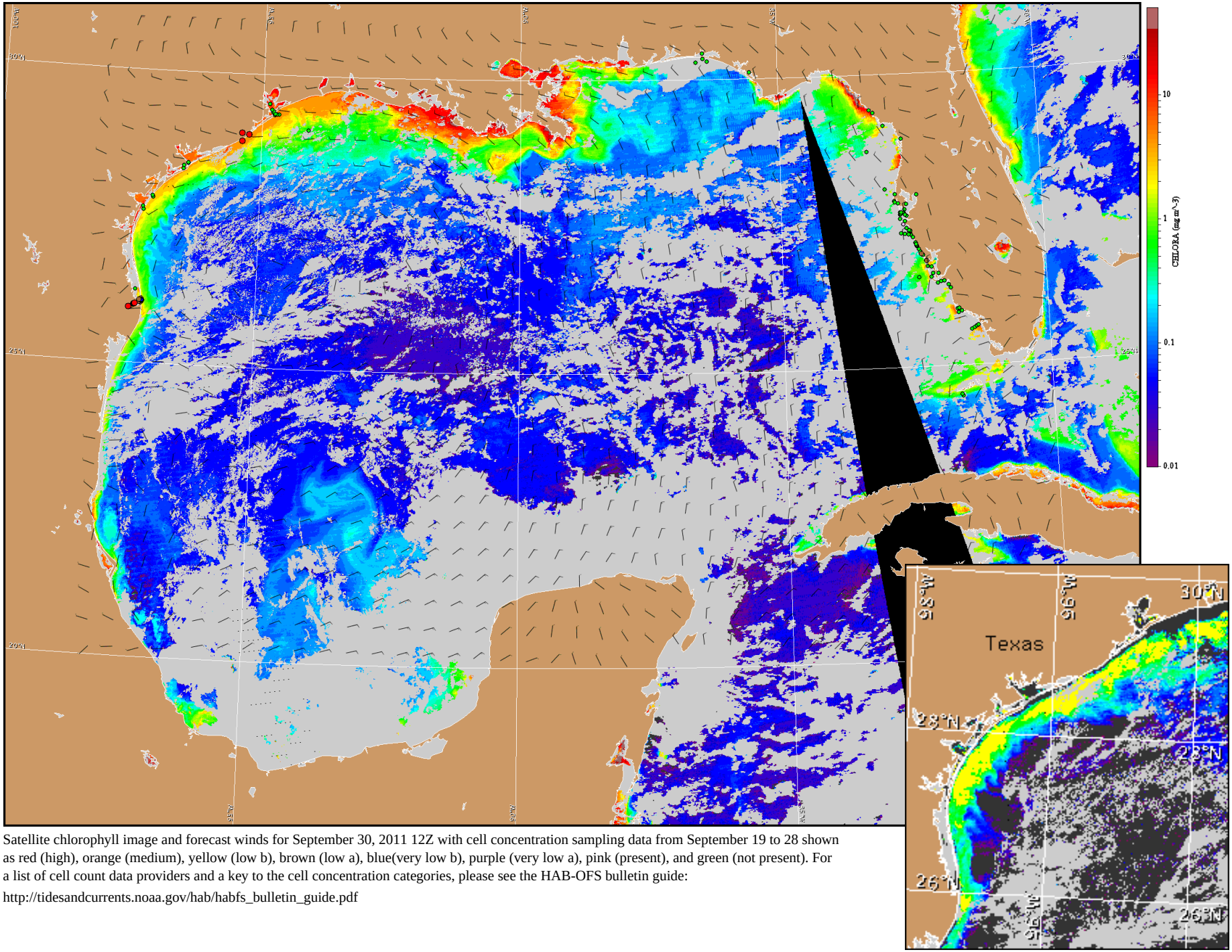


Wind Analysis

Galveston and Freeport area: South to southwest winds (5-15kn, 5-8m/s) today. North to northeast winds (5-20kn, 3-10m/s) Friday. Northeast winds (10-20kn, 5-8m/s) Saturday. East winds (10-15kn) Sunday.

Port Aransas: South to southeast winds (5-10kn, 3-5m/s) today. West winds (5kn, 3m/s) Friday shifting east-northeast Friday afternoon and evening (5-15kn, 3-8m/s). Northeast winds (15kn, 8m/s) Saturday. East winds (10-15kn, 5-8m/s) Sunday.

South Padre: Southeast winds (10kn, 5m/s). Northeast winds (15kn, 8m/s) Friday through Saturday. East winds (15kn) Sunday.



Satellite chlorophyll image and forecast winds for September 30, 2011 12Z with cell concentration sampling data from September 19 to 28 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).